CLAIMS

1. Method of interpolating a pixel (Px) from an intermediate line of a first field in a sequence of interlaced fields (A, B), comprising:

selecting at least one first pixel (P0) to which a first image information value (L0) is allocated from an image line lying above the intermediate line (A1) in the first field (A), and at least one second pixel (P2) to which a second image information value (L2) is allocated from an image line lying below the intermediate line (A2) in the first field (A);

selecting at least one third pixel (P1) to which a third image information value (L1) is allocated from an image line (B2), the vertical position of which corresponds to the position of the image line of the pixel to be interpolated (Px), from a second field (B);

determining a limit provided by the first and second image information values (L0, L2);

determining the position of the third image information value (L1) relative to the interval limits;

mixing the image information values (L0, L1, L2) by multiplying the first image information value (L0) by a first weighting factor (k0), the second image information value (L1) by a second weighting factor (k1), and the third image information value (L1) by a third weighting factor (k1), then adding the weighted image information values to obtain an image information value (Lx) for the pixel (Px) of the intermediate line, where the value of the third weighting factor (k1) is a function of the mathematical distance of the third information value (L1) from the interval limits, and the weighting factors (k0, k1, k2) are selected such that the image information value of the pixel to be interpolated lies with the interval limits.

2. Method according to claim 1, wherein the third weighting factor decreases with increasing distance from the closest interval limit when the third image information value (L1) lies outside the interval.

3. Method according to claim 2, wherein the third weighting factor decreases in proportion to the distance from the closest interval limit when the third image information value (L1) lies outside the interval.

4. Method according to claim 2, wherein the first and second weighting factors (k0, k2) are of equal size.

5. Method according to claim 1, wherein the third weighting factor (k1) is set to zero when its mathematical distance from the closest interval limit exceeds a specified value normalized for the interval width.

6. Method according to claim 5, wherein the third weighting factor (k1) is set to zero when its mathematical distance from the closest interval limit is more than double the interval width.

7. Method according to claim 1, wherein the first, second, and third weighting factors (k0, k1, k2) are set to equal size when the third image information value (L1) lies within the interval.

8. Method according to claim 1, wherein the value of the third weighting factor (k1) increases with decreasing distance from the center (M) of the interval when the third image information value (L1) lies within the interval.

9. Method according to claim 1, wherein the third weighting factor (k1) is set to one when the third image information value (L1) lies within the interval.

10. Method according to claim 1, wherein the third weighting factor (k1) is set at one when the mathematical distance of the third image information value (L1) from the center (M) of the interval is smaller than a specified value normalized for the interval width.

11. Method according to claim 9, wherein the third weighting factor (k1) is set at one when the mathematical distance of the third image information value (L1) from the center (M) of the interval is smaller than one fourth the interval width.

12. Method according to claim 1, wherein first an intermediate value is generated from the first image information value and the second image information value by multiplying the first image information value (L0) by a first weighting factor (k01), and the second image information value (L2) by a second weighting factor (k21), then adding the weighted image information values; and in which subsequently the intermediate value (Lz) is mixed with the third image information value (L1) by weighting the intermediate value (Lz) and the third image information value (L1), then adding the weighted intermediate value and weighted third image information value to generate the image information of the pixel to be interpolated (Px), wherein

the weighting factor of the third image information value (L1) is a function of its mathematical distance from the interval limits or the intermediate value (Lz).

13. Method according to claim 12, wherein the weighting factor of the third pixel (L1) is a function of the mathematical distance from the intermediate value.

14. A method for processing a signal sequence having output signal values and interpolated intermediate values, wherein one intermediate value is allocated to two output signal values, said method comprising:

determining an interval given by the output signal values;

determining the position of the intermediate value plotted relative to interval limits;

mixing the output signal values and the intermediate value by multiplying one of the output signal values by a first weighting factor, the other of the output signal values by a second weighting factor, and the intermediate value by a third weighting factor, then adding the weighted image information values to obtain an interpolated intermediate value, wherein the value of the third weighting factor is a function of the mathematical distance of the intermediate value from the interval limits and is selected such that the value of the intermediate value to be interpolated lies within the interval limits.